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ALLEMAGNE

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10. Feb. 2003

PATENT- UND RECHTSANWÄLTE
HANSMANN VOGESER BOECKER ALBER

Datum/Date

06-02-2003

Zeichen/Ref./Réf.

52964

Anmeldung Nr./Application No./Demande n°/Patent Nr./Patent No./Brevet n°.

99942549.9-2406- PCT/US9919902

Anmelder/Applicant/Demandeur/Patentinhaber/Proprietor/Titulaire

The Research Foundation of the State University of New York

VFI 6.3 + 6.4
+ 16.4 } not/2

PROCEEDING FURTHER WITH THE EUROPEAN PATENT APPLICATION PURSUANT TO
ARTICLE 96(1) AND RULE 51(1) EPC

A supplementary European search report has been drawn up concerning
the above European patent application (publication no. 1121379).

Since you have filed a request for examination prior to the trans-
mission of the supplementary European search report, you are hereby
invited to indicate within

TWO MONTHS

of notification of this invitation whether you desire to proceed
further with the European patent application.

If you do not indicate in due time that you desire to proceed further
with the European patent application, it will be deemed to be withdrawn
(Art. 96(3) EPC).

If you wish you may comment on the supplementary European search report
and amend, where appropriate, the description, claims and drawings
(Rule 51(1) EPC).

RECEIVING SECTION



REGISTERED LETTER

EPO Form 1224 04.85

99942549.9 DMEX

7001007 29/01/03

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Département à
La Haye
Division de la
recherche

□ Strych, Werner Maximilian Josef, Dr.
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ALLEMAGNE



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MÜNCHEN

- 3. FEB. 2003

- 3. Feb. 2003

PATENT- UND RECHTSANWÄLTE
HANSMANN VOGESER BOECKER ALBER

Datum/Date

31. 01. 03

Zeichen/Ref./Réf. 52964	Anmeldung Nr./Application No./Demande n°/Patent Nr./Patent No./Brevet n°. 99942549.9
Anmelder/Applicant/Demandeur/Patentinhaber/Proprietor/Titulaire The Research Foundation of the State University of	

COMMUNICATION

The European Patent Office herewith transmits

- ☐ the European search report
- ☐ the declaration under Rule 45 EPC
- ☐ the partial European search report under Rule 45 EPC
- ☒ the supplementary European search report concerning the international application under Article 157(2) EPC relating to the above-mentioned European patent application. Copies of the documents cited in the search report are enclosed.

The following specifications given by the applicant have been approved by the Search Division :

- ☐ Abstract ☐ Title ☐ Figure
- ☐ The abstract was modified by the Search Division and the definitive text is attached to this communication.
- ☐ The following figure will be published with the abstract, since the Search Division considers that it better characterises the invention than the one indicated by the applicant.

Figure:

- ☒ Additional copy(copies) of the documents cited in the European search report.

REFUND OF THE SEARCH FEE

If applicable under Article 10 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.



EPO Form 1507 02.93



CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1,4-7,10-14,21,24-27,32,35-38 (totally),
43-57 (partially)

alpha subunit of eag-like potassium channel elk1 (SEQ ID
NO:2)

2. Claims: 2,8,15-17,22,28,30,33,39,41 (totally),
43-57 (partially)

alpha subunit of eag-like potassium channel elk2 (SEQ ID
NO:3)

3. Claims: 3,9,18-20,23,29,31,34,40,42 (totally),
43-57 (partially)

alpha subunit of eag-like potassium channel eag (SEQ ID NO:4)



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
D,Y	WARMKE JW ET AL: "A family of potassium channel genes related to eag in Drosophila and mammals" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 91, no. 8, 12 April 1994 (1994-04-12), pages 3438-3442, XP002092026 ISSN: 0027-8424 * the whole document *	1,4-7, 10-14, 21, 24-27, 32, 35-38, 43-57	C07K14/00 C07K14/435 C12N5/16 C12N15/12 C12N15/63 G01N33/53 G01N33/566
Y	MEYER R ET AL: "CHARACTERIZATION OF AN EAG-LIKE POTASSIUM CHANNEL IN HUMAN NEUROBLASTOMA CELLS" JOURNAL OF PHYSIOLOGY, XX, XX, vol. PART 1, no. 508, 1 April 1998 (1998-04-01), pages 49-56, XP001087844 ISSN: 0022-3751 * the whole document *	1,4-7, 10-14, 21, 24-27, 32, 35-38, 43-57	
P,X	SHI W ET AL: "Cloning of a mammalian elk potassium channel gene and EAG mRNA distribution in rat sympathetic ganglia" JOURNAL OF PHYSIOLOGY,, vol. 511, no. PART 3, 15 September 1998 (1998-09-15), pages 675-682, XP002095399 ISSN: 0022-3751 * the whole document *	1,4-7, 10-14, 21, 24-27, 32, 35-38, 43-57	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			C07K
The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
Place of search		Date of completion of the search	Examiner
MUNICH		10 January 2003	Schwachtgen, J-L
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	VOLORIO S ET AL: "SEQUENCING ANALYSIS OF FORTY-EIGHT HUMAN IMAGE CDNA CLONES SIMILAR TO DROSOPHILA MUTANT PROTEIN" DNA SEQUENCE, NEW YORK, NY, US, vol. 9, no. 5/6, 1998, pages 307-315, XP000986990 ISSN: 1042-5179 Acc. No U69185 * table 1 *	2,8, 15-17, 22,28, 30,33, 39,41, 43-57	
P,X	ENGELAND B ET AL: "Cloning and functional expression of rat ether-à-go-go-like K ⁺ channel genes." THE JOURNAL OF PHYSIOLOGY. ENGLAND 15 DEC 1998, vol. 513 (Pt 3), 15 December 1998 (1998-12-15), pages 647-654, XP002226706 ISSN: 0022-3751 * figure 1 *	2,8, 15-17, 22,28, 30,33, 39,41, 43-57	
X	FRINGS S ET AL: "CHARACTERIZATION OF ETHER-A-GO-GO CHANNELS PRESENT IN PHOTORECEPTORS REVEALS SIMILARITY TO IKX, A K ⁺ CURRENT IN ROD INNERSEGMENTS" JOURNAL OF GENERAL PHYSIOLOGY, ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH,, US, vol. 111, no. 4, April 1998 (1998-04), pages 583-599, XP000992664 ISSN: 0022-1295 * the whole document *	3,9, 18-20, 23,29, 31,34, 40,42	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
A	WO 96 13520 A (PAUSCH MARK HENRY ;AMERICAN CYANAMID CO (US); PRICE LAURA ALICIA ()) 9 May 1996 (1996-05-09) * the whole document *	1-57	
The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
Place of search MUNICH		Date of completion of the search 10 January 2003	Examiner Schwachtgen, J-L
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	

EP 99 94 2549

10-01-2003

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9613520 A	09-05-1996	US 5559026 A	24-09-1996
		AU 4146996 A	23-05-1996
		EP 0789712 A1	20-08-1997
		JP 10508473 T	25-08-1998
		WO 9613520 A1	09-05-1996